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Taris, T.W.; Feij, J.A.; Capel, S.

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# Great Expectations – and What Comes of it: The Effects of Unmet Expectations on Work Motivation and Outcomes Among Newcomers

Toon W. Taris\*  
Radboud University Nijmegen

Jan A. Feij  
Free University Amsterdam

Sandra Capel  
Radboud University Nijmegen

The present research focused on newcomers' socialization process in a three-wave study among 1477 newcomers from seven Western (mainly European) countries. Based on previous research, we expected that unmet expectations regarding selected intrinsic work aspects would have adverse effects on work outcomes such as worker motivation for learning, effort, and turnover. Further, we expected that the strength of the effects of unmet expectations would vary as a function of the perceived importance of the work aspects in question. Structural equation modeling supported our expectations regarding the adverse effects of unmet expectations. However, the strength of these relationships did not depend on the importance attached to the work aspects. Instead, workers who attached much importance to particular work aspects reported higher levels of effort and a higher motivation for learning new behavior patterns. Further, newcomers tended to consider work aspects for which their expectations were not met as less important across time. We conclude that unmet expectations affect work outcomes both directly and indirectly, through the importance attached to particular work aspects.

## Introduction

One issue that has continued to attract the interest of researchers in applied psychology and organizational behavior concerns the work socialization of newcomers. Work socialization may be construed as a dynamic process in which newcomers reinterpret and revise both the meaning of work in a particular organizational setting and the view of themselves as members of these organizations (i.e., they adjust themselves to the job, Lance, Vandenberg, & Self, 2000; Louis, 1980). Conversely, they may also attempt to mold their work environment to meet their needs (Feij, Whitely, Peiró, & Taris, 1995; Lerner, 1984; cf. De Lange, Taris, Kompier, Houtman, & Bongers, 2005).

A successful socialization process is presumed to lead to outcomes that are beneficial to both the organization and the person. One prime "starting catalyst" (Lance *et al.*, 2000) for the development of such outcomes is the degree to which initial expectations concerning the job are met in practice. This primary status is evidenced in a variety of theories, e.g., those dealing with work socialization of newcomers, realistic job previews, and psychological contract theory. Although these theoretical frameworks address different substantive issues, they share the notion that anticipatory met expectations form the basis from which individual workers infer their feelings, beliefs, and attitudes regarding the organizations they work for.

Similar to earlier research, the present study is grounded on the assumption that met expectations are a critical condition for a successful work adjustment of newcomers. We extend previous work in two ways. First, we suggest that the degree to which (un)met expectations regarding particular job aspects affect work adjustment does not only

\*Address for correspondence: Dr. T. W. Taris, Department of Work and Organizational Psychology, Nijmegen University, PO Box 9104, NL-6500 Nijmegen, The Netherlands. E-mail: t.taris@psych.kun.nl

depend on the match between expectancies and experience *per se* but also on the *importance* that newcomers attach to these job aspects. A good match for a job aspect that a worker finds irrelevant may not be as strong a motivator for subsequent adjustment than aspects that are highly valued. Second, if newcomers adjust themselves to the job, it would seem possible that the degree to which expectations are met affects not only work outcomes such as turnover, commitment, and satisfaction but also person characteristics such as the value attached to particular job aspects. Below, we discuss these notions more fully. Then, we propose and test a process model for the relations among expectations, work outcomes, and the value attached to certain job aspects in a three-wave multi-nation study among 1477 newcomers.

## Unmet Expectations and Work Outcomes: A Theoretical Framework

Previous research has provided strong support for the assumption that the degree to which expectations of workers are met is associated with later work outcomes. For example, unmet expectations have been found to be associated with lower levels of identification with the organization and job involvement (Ashforth & Saks, 2000), higher levels of voluntary turnover (Buckley, Fedor, Veres, Wiese, & Carraher, 1998; Lance *et al.*, 2000; Pearson, 1995; Wanous, Poland, Premack, & Davis, 1992), low job satisfaction (Major, Kozlowski, Chao, & Gardner, 1995; Nelson & Sutton, 1991; Turnley & Feldman, 2000; Wanous *et al.*, 1992), higher levels of distress (Nelson & Sutton, 1991), lower commitment (Arnold, 1990; Major *et al.*, 1995; Wanous *et al.*, 1992), and lower levels of interpersonal trust (Robinson, 1996; Young & Perrewé, 2000). In the context of work socialization and adjustment, unmet expectations have been found to predict adverse scores on work adjustment (Feij *et al.*, 1995), even more strongly than personal dispositions such as general self-efficacy and negative affectivity (Saks & Ashforth, 2000). Although this evidence has not remained undisputed (e.g., Irving & Meyer, 1994, for a methodological critique), the general impression that emerges from this research is that unmet expectations are an important predictor of later work outcomes.

The degree to which newcomers feel that their expectations are met may be construed to reflect their evaluation of the outcome of their exchange relationship with the organization, emphasizing the powerful role possessed by individual psychological contracts (i.e., how well did the organization fulfill one's pre-entry expectancies, Dabos & Rousseau, 2004; Lance *et al.*, 2000). Based on their pre-entry expectations regarding the outcomes of this exchange relationship, newcomers consciously or unconsciously decide how much they will "invest" in this relationship (e.g., in terms of time, skill, effort, motivation). If this

relationship does not reap the anticipated returns (e.g., in terms of job security, variety, satisfaction, opportunities for further development, recognition from others), the exchange with the organization is *inequitable* (Adams, 1965), possibly leading workers to reduce their investments in this exchange relationship to make it more equitable (Taris, Van Horn, Schaufeli, & Schreurs, 2004).

From a slightly different angle, responses to violated expectations may be understood by using control theory (Buckley *et al.*, 1998; Carver & Scheier, 1981). In this approach, initial expectations form the standard by which later experiences are judged. The greater the difference between expectations and experiences, the larger the gap to which an individual must respond, and the more likely it is that an individual will take action to reduce or remove this gap, especially when experience does not live up to one's initial expectations (i.e., things are worse than expected). In this sense, unmet expectations may be considered a stressor that individuals must cope with (cf. Lazarus & Folkman, 1984). In sum, we argue that (a) newcomers enter the organization with expectations regarding the outcomes of their exchange relationship with the organization, on the basis of which they decide about their investments in this relationship; (b) unmet expectations lead to stress, which in turn (c) motivates workers to make the exchange relationship more equitable, that is, by decreasing their investments if their investments exceed their rewards obtained from the organization or, if workers' investments are lower than their rewards, by increasing their investments (Taris *et al.*, 2004).

Many of the results reported in the context of research on unmet expectations fit this framework. For example, previous research has often demonstrated that unmet expectations are associated with higher levels of turnover (Major *et al.*, 1995; Pearson, 1995; in their meta-analysis, Wanous *et al.*, 1992, found an adjusted correlation of .29 between met expectations and intent to remain). Turnover may be construed as an extreme form of withdrawal from an unrewarding exchange relationship, effectively terminating the stress resulting from this relationship. Lower levels of commitment and job involvement may be considered as forms of psychological withdrawal from an inequitable exchange relationship with the organization, and are often considered as precursors of withdrawal in the form of turnover (Stinglhamber & Vandenberghe, 2003). Finally, negative affect such as lack of job satisfaction may be understood as resulting from the stress associated with a unrewarding exchange relationship.

### *Importance of Unmet Expectations*

The theoretical notions outlined above more or less summarize common insights into the relationship between unmet expectations and work outcomes. One interesting feature of this framework, however, is that individual differences in the *importance* attached to particular work aspects are not taken into account. Newcomers will

presumably differ in the degree to which they value aspects such as, say, variety and autonomy in their work, and it may be assumed that especially unmet expectations regarding personally salient work aspects will be relevant in affecting work outcomes. The notion that the personal salience (or importance) of particular behaviors or situations partly determines the motivation for conducting that behavior or realizing that situation is a key aspect in the Expectancy-Value Theory (EVT; Feather, 1995). EVT proposes that some situations are perceived as having positive valence (they are attractive and personally important), whereas others are not (cf. Vansteenkiste, Lens, De Witte, & Feather, 2005). EVT predicts that the intensity of striving towards a particular alternative situation or behavior will be positively related to the degree to which that situation or behavior is valued. Previous research using the EVT supported the notion that especially personally salient situational aspects are powerful motivators for action (e.g., Feather, 1995; Taris, Heesink, Feij, 1995). This suggests that incorporation of the salience of particular types of unmet expectations may be a useful extension of current theory on the relation between unmet expectations and work outcomes.

Analogous to EVT, we propose that unmet expectations regarding the presence of work aspects with a positive valence will be much more powerful precursors of behavior (such as effort expenditure), motivation (e.g., to acquire new skills), and affect (such as mental health complaints) than unmet expectations regarding other, largely irrelevant work aspects. Consistent with this reasoning, Ashforth and Saks (2000) assumed that unmet expectations (in their case, regarding job control) affect work adjustment among newcomers, especially when "control motivation" (i.e., the degree to which being in control is personally salient) is strong (note that they did not test this notion empirically, but rather used it as an auxiliary hypothesis to support their reasoning that unmet expectations should be related to their outcome variables). Summarizing, the degree to which (un)met expectations regarding particular job aspects affect work adjustment should not only depend on the match between expectancies and experience but also on the importance that newcomers attach these job aspects; the link between unmet expectations regarding a particular aspect and the study outcomes should be stronger when individual workers consider this aspect important.

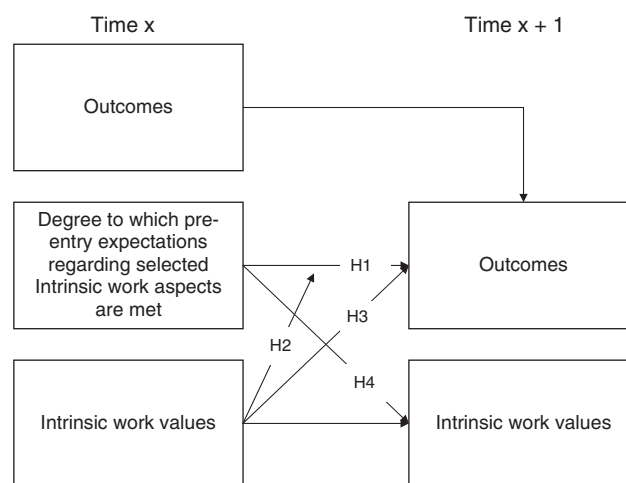
### Adjustment and Importance

If newcomers adjust themselves to the job (Feij *et al.*, 1995; Lance *et al.*, 2000), it would seem possible that the degree to which expectations regarding particular job aspects are met may also affect the importance attached to these aspects. That is, one way of resolving the stress resulting from unmet expectations is to re-evaluate the importance of these aspects: Unmet expectations should be stressful only to the degree that the job aspect in question represents

a valued asset (cf. Hobfoll, 1989). By adjusting the degree to which newcomers perceive a particular job aspect as important, they may be able to cope psychologically with an in-this-respect unrewarding exchange relationship. The driving mechanism behind such a re-evaluation may be the wish to reduce the dissonance between the fact that one holds a particular job, in spite of the fact that particular aspects of the exchange relationship with the organization are unrewarding (cf. Festinger, 1954; Geen, 1995). Such a mechanism would also mesh well with the notion that during their organizational socialization, newcomers adjust themselves to the job (Feij *et al.*, 1995; Lerner, 1984). Thus, we propose that the degree to which expectations regarding particular job aspects are met affects the importance attached to these aspects, such that job aspects for which expectations are not met will be considered as less important across time.

### Model and Study Hypotheses

Figure 1 presents the model to be tested in this study. This model is based on the notions discussed above and may be considered as a set of theory-guided hypotheses. Basically, it includes three sets of variables that are measured repeatedly across time. The first set includes four well-researched variables that cover aspects of worker motivation, affect, and behavior that are important from the viewpoint of both the individual worker and the organization s/he works for. *Turnover* is a measure of organizational withdrawal. *Self-rated effort* may be construed as representing an indirect measure of withdrawal, in that lowering one's effort may occur in an attempt to make an unrewarding exchange relationship with the organization more equitable. *Learning motivation* may be construed as a measure of



**Figure 1. Heuristic longitudinal model for the relations among the study variables, which is presumed to apply for both the Time 1–Time 2 and the Time 2–Time 3 interval. In the analyses, the model is complemented with effects of several background variables. “Hx”, Hypothesis x.**

the motivation to perform extra-role behavior, i.e., to engage in activities targeted towards enlargement of their repertoire of skills needed to realize their work aspirations. Finally, a measure of *mental health complaints* was included to tap the degree to which newcomers experience stress.

The second set of variables includes measures of the degree to which the study participants perceived their pre-entry expectations to be met in practice. In this study, we focused on *expectations towards intrinsic work aspects* such as autonomy, variety, and opportunities for learning rather than on extrinsic aspects such as pay and security, because the latter type of aspects is often laid down in a formal employment contract; as such, it would seem reasonable to assume that they are not normally part of the unwritten *psychological* contract between the employee and the organization. We expect that met expectations lead to favorable work outcomes across time (i.e., lower levels of turnover, Hypothesis 1a; lower levels of mental health complaints, Hypothesis 1b; higher levels of effort, Hypothesis 1c; and higher levels of learning motivation, Hypothesis 1d).

The final cluster of variables includes measures of the importance attached to certain intrinsic work aspects (*intrinsic work values*; these are commensurate with the aspects included in the second set of variables). We presume that the importance attached to these aspects will moderate the relationship between met expectations (for this aspect) and the outcome variables, such that the relationship between expectations and outcomes is relatively strong when the importance attached to the work aspects in question is high (Hypothesis 2). Specifically, we expect that the relationship between unmet expectations and turnover (mental health/effort/learning) will be stronger if one attaches much importance to the respective work aspects (Hypotheses 2a–d, respectively).

Further, it would seem possible that the importance attached to intrinsic work aspects affects the outcomes directly (Hypothesis 3). For example, it would seem possible that newcomers who attach much importance to intrinsic work values lose interest in their current job sooner than others, because after a certain amount of time many jobs do not offer much opportunities for further development. For intrinsically motivated workers, this should lead to relatively high levels of turnover (Hypothesis 3a) and work stress (Hypothesis 3b) across time. Further, participants attaching much importance to intrinsic work aspects may be expected to display higher levels of motivation for learning than others (Hypothesis 3d). If this is correct, these workers should be more productive than their non-intrinsically motivated colleagues (Karasek & Theorell, 1990; Taris & Kompier, 2005). Their relatively high output might lead them to rate their work-related effort as higher than that of their colleagues (Hypothesis 3c).

Finally, we expect that the degree to which one's initial expectations regarding particular intrinsic work aspects are met affects the evaluation of the importance of these

(Hypothesis 4). By adjusting the degree to which newcomers perceive a particular job aspect as important, they may be able to reduce the cognitive dissonance resulting from the fact that they hold a particular job, in spite of the fact that particular aspects of the exchange relationship with the organization are unrewarding.

Measures for our three sets of variables are available for three occasions with 1 year in between; the model presented in Figure 1 is presumed to apply for both Time 1–Time 2 and Time 2–Time 3. Further, in the analyses this model will be extended with main effects of participant gender and occupational group (participants were drawn from two groups: office automation workers and machine operators) on all outcome variables (i.e., all measures at Time 2 and Time 3).

## Method

### Sample

The data were collected in a multination three-wave prospective cohort study among newcomers on the labor market. This study was designed as a follow-up to the international Meaning of Working (MOW) project conducted during the 1980s (Meaning of Working International Research Team, 1987), involving largely the same set of researchers. Similar to the MOW project, the Work Socialization of Youth (WOSY) study was designed as an international research effort with multiple rounds of data collection in various Western countries (WOSY International Research Group, 1989). The choice for these countries was partly based on convenience (participating researchers found it most easy to collect data in their own country) and partly based on the wish to have input from different Western cultures. However, as not all researchers involved in the WOSY project succeeded in obtaining funding for three rounds of data collection, the data used in the present research came from seven predominantly European countries (Belgium, England, Spain, Portugal, Italy, the Netherlands, and Israel). At the first wave of the study, 2509 employed youth ( $M_{\text{age}} = 20.7$ ,  $SD = 3.2$ ; 62% male) who were working as either machine operators (47%) or office technology (53%) were contacted for participation in the study. The countries were roughly equally represented in the study, contributing 10.4–16.6% of the study participants (median percentage was 15.3%). The machine operators were all in production and manufacturing organizations, including job titles such as die casting machine operator, molder, and welder. The office technology panel included job titles such as word processing operator, data entry worker, and microcomputer operator. The samples were not intended to be representative of either national or regional labor forces, but they do reflect the typical gender composition of particular occupations in the participating countries (Feij *et al.*, 1995).



Participants were contacted either by contacting training schools for the names, addresses, and work location of potential participants, or by contacting employers for the same information. In order to be selected, participants had to be between 17 and 22 years of age at the beginning of the study, and they were required to be employed for 3–9 months at the beginning of the study (which coincides with the common probationary period in Europe). The data collection for the second ( $N = 1903$ , 75.9% response) and third ( $N = 1477$ , 77.6% response) wave of the study occurred 1 and 2 years, respectively, following the initial data collection. This particular time lag was chosen because developmental outcomes may require a 6- to 12-month period to occur (De Lange, Taris, Kompier, Houtman, & Bongers, 2004; Van Maanen & Schein, 1979); further, 1-year time lags are convenient for controlling seasonal effects. The fact that the data were collected in a prospective cohort design makes this data set especially suitable for testing the hypotheses formulated earlier on. As all participants are in a similar stage of their career and of about the same age, between-participant differences in job experience and the like should be minimized.

### Variables

The questionnaires used in this study were originally developed in English. After these questionnaires were developed, they were translated to the native languages of the non-English-speaking countries (e.g., Dutch for Belgium and the Netherlands, and Hebrew for Israel). The linguistic equivalence of all measures used in this study was established through the use of back-translation procedures. In conducting these back translations, we used individuals who were fluent in both the language of that country and English. We did not use a mechanical back-translation procedure of first having one person translate from English to the native language, and then another from the native language back to English. Rather, the procedure used was to discuss each question and the alternatives in a small group of persons fluent in both languages. Discussion occurred until agreement was reached as to the linguistic equivalence of the questions in both languages. These procedures for establishing equivalent measures were used in all non-English-speaking countries (Feij *et al.*, 1995).

**Met Expectations.** This concept refers to the degree to which one's *a priori* expectations regarding five intrinsic key features of one's job were met in practice. At each occasion, the respondents indicated for each aspect to which extent their present job was better or worse than expected at job entry (1 = "much worse than expected," 5 = "much better than expected"). These features included (a) opportunity to learn new things, (b) variety, (c) interesting work, (d) match between your job requirements and your abilities and experience, and (e) autonomy. This measure of correspondence between expectations and experience was drawn from a study of turnover conducted among new workers in the

United States (Dunnette, Arvey, & Banas, 1973) and slightly adapted by the Meaning of Working (MOW) International Research Team (1987).  $\alpha$ 's were .76, .80, and .79 for Time 1, Time 2, and Time 3, respectively.

**Intrinsic work values** were measured at each occasion using five items devised by the Meaning of Working International Research Team (1987). These five items were commensurate with the five items used in the correspondence scale. At each occasion, the respondents indicated how important it was to them that their work life contained (a) a lot of opportunity to learn new things, (b) a lot of variety, (c) interesting work (work you really like), (d) a good match between your job requirements and your abilities and experience, and (e) a lot of autonomy (you decide how to do your work) (1 = "very unimportant," 5 = "very important"). Preliminary analyses revealed that whereas the reliability of this scale was low for each time point ( $\alpha$ 's ranged from .45 to .54), it could not be improved by omitting particular items. Instead of following the standard procedure of summing the scores on these five items to yield a single scale, we decided to treat the items as manifest indicators of a latent construct in the structural equation models. This latent variable is empirically defined in terms of the common variance among its five indicators; the unique part of their variances is considered as error variance and does not affect the latent variable. This procedure should result in an unbiased estimate of the variance of the latent variable, as well of its associations with other concepts in the model (Jöreskog & Sörbom, 1999; Lance & Vandenberg, 2002).

For the multivariate analysis of variance (MANOVAs) and logistic regression analysis, this latent variable approach was impossible. In these analyses, we used a simple scale score that was computed as the mean of the five items. As the reliability of this scale is low, in these analyses the effects of this concept will presumably be estimated conservatively (cf. MacKenzie, 2001).

**Mental health complaints** were measured using Goldberg's (1972) General Health Questionnaire (GHQ, 12-item version). This scale taps the degree to which the participants suffered from stress-related mental health complaints (such as sleeplessness, worry, lack of self-confidence, and stress), how often these had applied to them during the last few weeks compared with how they normally felt (1 = "less than usual," 4 = "much more than usual"). The reliability of this scale was .77, .80, and .80 for Time 1, Time 2, and Time 3, respectively.

Based on an extensive conceptual analysis of the work of Karasek and Theorell (1990), *learning motivation* was conceptualized in terms of the motivation to acquire new skills and to develop new behavior patterns (cf. Taris & Kompier, 2005). Consistent with this notion, a six-item scale tapped the degree to which (i) workers engaged in activities targeted towards enlargement of their repertoire of skills needed to realize their work aspirations, and (ii) they had actually learned additional skills. The first

aspect (engagement in activities targeted towards enlargement of skills) was measured using three items drawn from Backman (1978), respectively "I have recently sought advice from my co-workers, family or other people about additional training or experience I need to improve my future work prospects," "Since I have worked here, I have initiated talks with my supervisor about training or work assignments I need to develop skills that will help my future work chances," and "I have made my supervisor aware of my work aspirations and goals" (1 = "not at all," 5 = "a great deal"). The second aspect (degree to which the participants had actually acquired new skills) was measured using three items proposed by Penley and Gould (1981), namely "I have developed skills which may be needed in future positions," "I have gained experience in a variety of work assignments to increase my knowledge and skills," and "I have developed more knowledge and skills critical to my work unit's operation."

Confirmatory factor analyses revealed that at each time point, one factor accounted for the associations among the items, chi-squares with 9 df's ( $N = 1477$ ) varied from 17.78 to 23.72, the root mean squared residuals (RMSEA) varied from .036 to .044, and the non-normed fit indexes varied from .98 to .99. Values of .05 and lower (for RMSEA) and .90 and over (for non-normed fit index (NNFI)) indicate an acceptable fit (Byrne, 2001). Further, the standardized factor loadings varied from .33 to .76 (median loading was .61). These figures suggest that a more complex model (e.g., a two-factor model) is not needed to account for the associations among these items, and that a simple structure was reached for all three occasions. Consistent with these findings, the reliability of this scale was .69, .73, and .75 for Time 1, Time 2, and Time 3, respectively. In conjunction, these six items cover our concept of learning motivation quite well, both in terms of what they did to acquire new skills and whether they have actually acquired such skills.

*Self-reported effort* was measured with two items: "How hard do you work at your present job now compared with when you first began working at it" and "How hard to you work in your present job compared with other jobs you held" (1 = "much less hard," 5 = "much harder") (WOSY International Research Group, 1989);  $r$ 's were .42, .43, and .48 for Time 1, Time 2, and Time 3, respectively.

*Turnover* was measured by asking the participants at Time 2 and Time 3 whether they had changed employers in the preceding year (0 = "same employer," 1 = "different employer"). Finally, respondent *gender* and *occupational group* (machine operators vs. office technology workers) were included in the analyses. As these variables merely served as control variables, no hypotheses concerning their effects were formulated.

### Statistical Analysis

*Nonresponse Analysis.* Comparison of the Time 1 scores on the study variables of those who participated in

the third wave with the Time 1 scores with all other participants (total  $N = 2509$ ) revealed that nonresponse had been selective,  $F(7, 2419) = 7.57$ ,  $p < .001$ ,  $\eta^2 = .02$ ; follow-up analysis revealed that those who remained in the study were slightly younger ( $M = 20.5$ ,  $SD = 3.20$ ) than those who dropped out of the study ( $M = 20.9$ ,  $SD = 3.11$ ),  $F(1, 2425) = 10.2$ ,  $p < .001$ ,  $\eta^2 = .004$ , whereas the first group also reported significantly fewer mental health complaints ( $M = 8.50$ ,  $SD = 4.48$ ) than the latter group ( $M = 9.35$ ,  $SD = 4.92$ ),  $F(1, 2425) = 19.6$ ,  $p < .001$ ,  $\eta^2 = .01$ . Thus, restriction of range effects may occur for these variables; for the other variables, no evidence of selective dropout was found. Given the low effect sizes, however, we expect that selective dropout will not bias our findings substantively.

*Turnover.* The subsequent analyses were based on the participants who completed all three waves of data collection. One aim of this study was to examine the effect of unmet expectations on actual withdrawal, i.e., turnover. As turnover is a dichotomous variable, the standard assumption in structural equation modeling (SEM) that all variables included in the analysis are multivariately normally distributed was not met. Therefore, we used hierarchical logistic regression analysis to model the effects of the Time 1 variables on turnover. The first block entered in the analysis included the background variables age, occupational group and gender; the second block included the main effects of Time 1 learning motivation, effort, intrinsic work values, met expectations, and mental health complaints; and the final block included the met expectations  $\times$  intrinsic work aspects interaction term (this interaction was computed following procedures implemented by Cohen, Cohen, West, & Aiken, 2002). Thus, the met expectations  $\times$  intrinsic work aspects interaction term was entered last to see whether inclusion of this term contributed significantly to the explanation of turnover, beyond the main effects of its constituent variables.

*Trends Across Time: Comparison of Means.* In order to study the across-time development of the outcome variables (which may be considered as indicators of work adjustment), a 3 (Time; Time 1 vs. Time 2 vs. Time 3) by 5 (type of outcome: learning motivation, effort, health complaints, intrinsic work values, met expectations) MANOVA was conducted with Time as a within-participants variable with planned contrasts, testing for its possible linear and quadratic effects. Univariate ANOVAs with planned contrasts on Time were conducted by way of follow-up analyses. These analyses were conducted for the participants who did not report a job change across the 2-year study interval ( $N = 1251$ ).

*Structural Analyses.* The relationships among the study variables (with the exception of the effects of the Time 1 measures on turnover) were examined using structural equation analysis (SEM, Jöreskog & Sörbom, 1999). In this approach, an *a priori* model that can reasonably be expected to account for the relationships among the study variables is specified and fitted to the data.

Model fit was assessed using the chi-square test, as well as the RMSEA and the NNFI. As there seemed no reason to assume that the strength of the lagged effects would vary across time, corresponding Time 1–Time 2 and Time 2–Time 3 effects were constrained to be equal. This procedure has the advantage that the power of the test to reject the null hypothesis of no effect increases, as the model parameters are now estimated on the basis of both the Time 1–Time 2 and the Time 2–Time 3 information. As the reliability analyses for our measure of intrinsic work values yielded rather low  $\alpha$ 's, 3 five-indicator latent variables were specified for this construct (one for each occasion). This approach has the advantage that the error component of each item is partialled out, which should result in unbiased estimates of the participants' scores on the latent variable underlying the manifest scores on the five-indicator variables (Jöreskog & Sörbom, 1999; Lance & Vandenberg, 2002). For the other concepts included in the analyses, there was a one-to-one correspondence between the latent variable and its manifest indicator; the reliabilities of these other concepts were quite acceptable, thus omitting the need to control for possible error.

## Results

### *Logistic Regression Analysis*

Table 1 presents the results of a hierarchical logistic regression analysis on the chances that the participants in our study would leave the organization. This analysis included all participants who participated in all three waves ( $N = 1477$ ). In the first step, the background variables age, occupational group and gender were entered, of which only

the first was significantly associated with turnover. As parameter estimates of lower than 1.00 indicate negative effects, older participants were less likely to leave the organization than others (an effect of .74,  $p < .001$ , implying that when age increases with 1 SD, the chances of turnover decrease with 35%). This effect remained virtually unchanged after entering the next three blocks.

After entering the second block, we found a significant effect of met expectations on turnover; participants who feel that their initial expectations are met (or even exceeded) are less likely to leave the organization than others (an effect of .80,  $p < .05$ ; this is tantamount to saying that when the score on met expectations increases with 1 SD, the chances on turnover decrease with 25%) (Hypothesis 1a confirmed). Contrary to our expectations, there was no significant direct effect of intrinsic work values on turnover (Hypothesis 2a rejected). The third block, including the met expectations  $\times$  intrinsic work values interaction term, did not add significantly to explanation of the outcome variable. Thus, although our assumption that unmet expectations would increase the chances on turnover was supported, the idea that the importance attached to intrinsic work values would moderate this relationship was not confirmed (Hypothesis 3a rejected).

### *Comparison of Means*

Table 2 presents the means and SDs for the variables of substantive interest as a function of time. This analysis featured all participants who remained in the study and who did not report a change of job and/or organization ( $N = 1251$ ). MANOVA revealed main effects of Time,

**Table 1. Results of a hierarchical logistic regression analysis on the chances that young workers will leave their job in the 2 years after the first study wave,  $N = 1477$ ,  $df$  in parentheses**

	Estimates (Exp(B))		
	Model 1	Model 2	Model 3
Age	.74**	.71**	.73**
Occupational group	.93	.93	.90
Gender	.87	.88	.88
Time 1 learning motivation		1.13	1.18
Time 1 effort		.91	.88
Time 1 intrinsic work values		1.05	1.04
Time 1 mental health complaints		1.01	.99
Time 1 met expectations		.80*	.77*
Met expectations $\times$ intrinsic work interaction values			.96
$\chi^2$ (overall model)	19.5 (3)**	32.7 (8)**	35.6 (9)**
$\chi^2$ (change)	19.5 (3)**	13.2 (5)**	2.9 (1)
$R^2$	.019	.032	.036

Note: \* $p < .05$ , \*\* $p < .001$ .



**Table 2. Means and standard deviations for the work variables as a function of time,  $N = 1251$** 

	Time 1		Time 2		Time 3		Univariate effects	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> (linear)	<i>F</i> (quadratic)
Learning motivation	3.07	.74	3.14	.75	3.17	.78	17.7**	1.1
Effort	3.65	.95	3.64	.97	3.62	.98	1.2	.1
Health complaints	9.86	1.78	10.07	1.78	10.12	1.80	22.0**	3.5
Intrinsic work values	8.48	4.48	9.09	4.76	9.06	4.67	16.4**	6.4*
Met expectations	3.50	.63	3.50	.63	3.49	.63	.14	.15

Note: See text for the significance of the multivariate main and interaction effects. \* $p < .05$ , \*\* $p < .01$ .

$F(2, 1199) = 13.5$ ,  $p < .001$ ,  $\eta^2 = .02$ , of Type,  $F(4, 1197) = 8159.3$ ,  $p < .001$ ,  $\eta^2 = .97$ , and a Time  $\times$  Type interaction effect,  $F(8, 1193) = 5.4$ ,  $p < .001$ ,  $\eta^2 = .04$ . Especially, the effects involving Time are of substantive interest, suggesting that the average scores on the study variables change across time and that this change depends on the type of concept under study. Univariate follow-up analyses (ANOVAs) with planned contrasts on Time revealed that the scores on learning motivation and health complaints increased linearly across time ( $M$ 's were 3.07, 3.14, and 3.17, for Time 1, Time 2, and Time 3 Learning motivation, respectively; the respective means were 9.86, 10.07, and 10.12 for Time 1, Time 2, and Time 3 Mental health complaints). The non-linear effects of Time were not significant for these concepts.

We found no across-time change in the average levels of self-reported effort and met expectations, suggesting that at the group level individual changes in these concepts cancel each other out; there is no particular time-graded developmental trajectory associated with these concepts (note that this does not imply that meaningful change on the *individual* level is absent). However, for the importance attached to particular intrinsic work values, we found both linear and non-linear change. Table 2 reveals that the participants tended to value these aspects more strongly during the 1-year Time 1–Time 2 interval ( $M$ 's were 8.48 and 9.09, respectively), after which the average score on this concept remained unchanged ( $M$ 's were 9.09 and 9.06 for Time 2 and Time 3, respectively). Thus, this analysis reveals that at the group level, the participants displayed higher levels of learning motivation and mental health complaints across time, while they valued intrinsic work aspects increasingly more strongly. Although these results are suggestive, they are uninformative regarding the individual-level processes underlying these changes. To gain more insight into these processes, a structural equation model was tested and fitted to the data.

### Structural Equation Analysis

The three-wave extension of the model presented in Figure 1 fitted the data quite well,  $\chi^2$  ( $df = 325$ ,  $N = 1251$ ) = 1628.2, RMSEA = .06, NNFI = .90. Inspection of the

separate effects showed that several of these did not significantly differ from zero, and these were omitted from the model. Model fit, however, remained acceptable. The final model (significant effects only) yielded a  $\chi^2$  value ( $df = 351$ ,  $N = 1251$ ) = 1649.4, RMSEA = .05, NNFI = .90. Table 3 presents the standardized structural effect estimates for the final model; to facilitate interpretation, Figure 2 presents the lagged effects of the variables of interest (i.e., excluding the effects of the background variables) graphically. Note that the lagged Time 1–Time 2 effects were constrained to be equal to the corresponding Time 2–Time 3 effects; thus, we need only discuss effects for one of these intervals.

One interesting feature of the present data set is that the Time 1–Time 2 and Time 2–Time 3 stabilities are often remarkably low, ranging from .27 to .87, median value .45. This suggests that the intra-person stability of the outcome variables is relatively low, with the single exception of intrinsic work values for which high stability was found (a standardized effect of .87 – note that this is the only concept for which a latent variable approach was used). As regards the effects of met expectations, Figure 2 shows that participants who reported that their initial expectations were met or even exceeded report lower levels of mental health complaints and higher levels of self-reported effort and intrinsic work values across time (standardized effects of  $-.05$ ,  $.11$ , and  $.04$ , respectively, all  $p$ 's  $< .05$ ; Hypotheses 1b, 1c, and 4 supported). Contrary to our expectations, there was no significant association between the degree to which one's expectations were met and learning motivation (Hypothesis 1d rejected). Further, participants attaching much importance to intrinsic work aspects report higher levels of effort and learning motivation than others (effects were  $.04$  and  $.08$ , respectively; Hypotheses 3c and 3d supported). These effects, albeit small, replicate across both time intervals. Contrary to our expectations, there was no longitudinal association between intrinsic work values and mental health complaints (Hypothesis 3b rejected). Thus, our assumptions regarding the effects of both intrinsic work values and met expectations on work outcomes were partly supported: Unmet expectations and low scores on intrinsic work values tend to be

Table 3. Standardized effect estimates for the final structural equation model (stayers only,  $N = 1251$ )

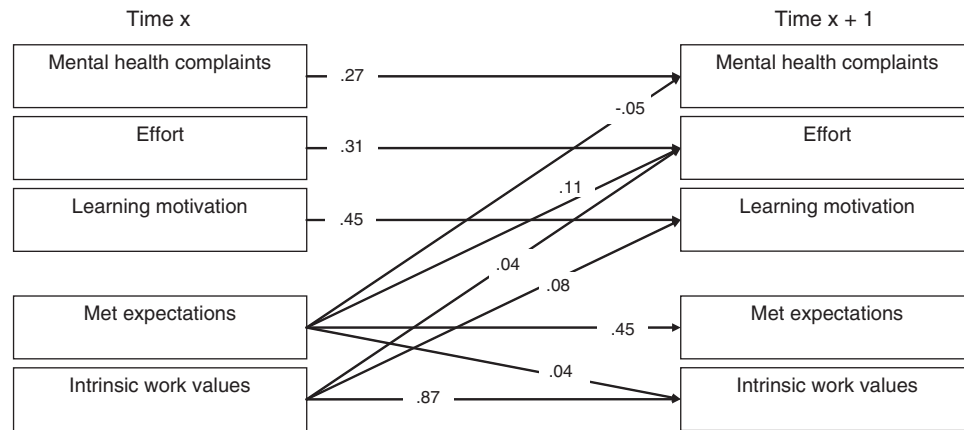
	Time 3					Time 2				
	Health complaints	Effort	Learning motivation	Intrinsic work values <sup>a</sup>	Met expectations	Health complaints	Effort	Learning motivation	Intrinsic work values <sup>a</sup>	Met expectations
Age										
Occupational group										
Mental health complaints	.19***					.10***	-.13***			-.10**
Effort		.23***				.27*** <sup>b</sup>	-.11***		.10**	-.07***
Learning motivation			.19***				.31*** <sup>b</sup>	.45*** <sup>b</sup>		
Intrinsic work values <sup>a</sup>				-.10*			.04* <sup>b</sup>	.08*** <sup>b</sup>	.87*** <sup>b</sup>	
Met expectations					.18***	-.05* <sup>b</sup>	.11*** <sup>b</sup>		.04* <sup>b</sup>	.45*** <sup>b</sup>
Time 2										
Mental health complaints	.27*** <sup>b</sup>									
Effort		.31*** <sup>b</sup>								
Learning motivation			.45*** <sup>b</sup>							
Intrinsic work values <sup>a</sup>		.04* <sup>b</sup>	.08*** <sup>b</sup>	.87*** <sup>b</sup>						
Met expectations	-.05* <sup>b</sup>	.11*** <sup>b</sup>		.04* <sup>b</sup>	.45*** <sup>b</sup>					
R <sup>2</sup>	.17	.27	.33	.59	.32	.10	.15	.23	.74	.22

Notes: Age was not significantly related to any of the outcome variables.

<sup>a</sup>This is a latent variable with five indicator variables; factor loadings varied from .22 to .58 (median loading = .42), all  $p$ 's < .001.

<sup>b</sup>Corresponding pairs of lagged effects (i.e., Time 1–Time 2 and Time 2–Time 3 effects) were constrained to be equal.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .



**Figure 2. Longitudinal relations among the study variables. Effect estimates apply to both the Time 1–Time 2 and the Time 2–Time 3 interval. All effects significant at  $p < .05$ . More detailed information is provided in Table 3.**

longitudinally associated with unfavorable changes in work outcomes.

Finally, we found that older participants reported higher levels of mental health complaints and lower levels of effort and met expectations than others (effects of .10,  $-.13$ , and  $-.10$ , respectively, all  $p$ 's  $< .01$ ), whereas members of the machine operators group attached more importance to intrinsic work values and reported lower levels of effort and met expectations than the office technology group. No effects of gender were found (note that the variables Gender and Occupational group overlap strongly, suggesting that the effects of the latter variable may to some extent actually signify gender differences).

**Moderator Effects of Intrinsic Work Values.** To examine the possible moderator effects of intrinsic work values on the longitudinal effects of met expectations on the outcome variables (Hypothesis 2), we used multiple group analysis as implemented by Jöreskog and Sörbom (1999). Two groups were created on the basis of their manifest scores on Time 1 intrinsic work values: one with below-average scores ( $N = 635$ ) and the other including the remaining participants ( $N = 616$ ). The model obtained in the previous analysis was then specified for both groups (note that the measures of intrinsic work values were omitted from this analysis, as this concept was used to stratify the sample). For simplicity and because the scores on intrinsic work values changed across time (implying that for Time 2 a different division in low vs. high intrinsic work values would be obtained), we restricted this analysis to the Time 1–Time 2 variables. The across-group unconstrained model (in which the effects of met expectations on the outcome variables could vary freely across groups) yielded a  $\chi^2$  ( $df = 18$ ,  $N = 1251$ ) = 16.75, RMSEA = .0, NNFI = 1.00. The model in which the effects of met expectations were constrained to be equal across groups fitted the data virtually equally well,  $\chi^2$  ( $df = 21$ ,  $N = 1251$ ) = 21.35, RMSEA = .004, NNFI = 1.00;  $\chi^2$  (change) ( $df = 3$ ,  $N = 1251$ ) = 4.60,  $p > .05$ . These results

indicate that there is no support for our assumption that unmet expectations regarding particular work aspects affect work outcomes especially strongly when participants attach much importance to these (Hypotheses 2b–d rejected).

## Discussion

The present study was designed to shed more light on the organizational socialization process of newcomers. At the heart of this research was the assumption that met pre-entry expectations would result in favorable socialization outcomes in terms of lower withdrawal-related behaviors and attitudes (i.e., lower levels of turnover, and higher levels of effort and motivation for acquiring new skills) and lower levels of stress (i.e., mental health complaints). We assumed that the effects of met expectations regarding particular work aspects on these outcome variables would be moderated by the importance attached to these aspects. Further, the degree to which pre-entry expectations regarding work aspects are met would affect the importance attached to these aspects. Finally, we proposed that the degree to which participants attach particular work aspects important could affect the scores on work outcomes such as effort and learning motivation directly as well.

Our results were partly consistent with these expectations, as well as with the results of previous research. We found higher levels of turnover and health complaints and lower levels of intrinsic work values and effort among participants who felt that their initial expectations were not met. Similarly, newcomers who attached much importance to intrinsic work aspects reported higher motivation for learning and higher levels of self-rated effort than others. We found no support for the idea that unmet expectations regarding particular job aspects would affect the outcome variables especially strongly for participants who attached much importance to these aspects.

### Study Limitations

Perhaps the most important limitation of the present research is that the lagged effects reported in this study are usually (very) low (ranging from .04 to .11), raising the issue of statistical significance vs. practical relevance. One way of responding to this critique is to point out that it is quite customary in longitudinal research to find high across-time stability, implying that there is little across-time change left to explain, in turn leading to low effect sizes for other explanatory concepts (Taris, 2000). Thus, low effect estimates are only to be expected. This does not imply, however, that these effects are void of practical meaning. Just like drops of water may dent a stone in time, long-term exposure to unmet expectations may have serious consequences (De Lange *et al.*, 2004). In this light, it is noteworthy that the effects of met expectations on the outcome variables did not vary across time: For the Time 1–Time 2 interval, they were as strong as for the Time 2–Time 3 interval. Thus, the significance of unmet expectations for the occurrence of adverse work outcomes does not wear out in time, at least not for the first 2.5 years of newcomers' appointments.

A second important shortcoming of the present research is its exclusive reliance on self-report measures. It is well known that the correlations among concepts that were measured using such an approach may be inflated due to methodological artifacts such as common method variance, halo-effects or the wish to answer consistently (Conway, 2003). Although it would seem likely that such processes will have affected the within-wave correlations among the concepts measured in this study, it would seem equally likely that such processes will be less prominent for the *longitudinal* effects in our research. For example, few participants will remember their answers on a questionnaire that was completed as long as an year ago, meaning that we can effectively rule out inflatory processes involving conscious processing of previously given answers (e.g., the wish to answer consistently can in all likelihood not account for the lagged associations among our study concepts).

A third limitation concerns the choice of the countries involved in the present research. As indicated earlier, the choice for these countries was partly due to convenience (participating researchers conducted research in their own country), partly due to the wish to have some coverage of the Western world, and partly due to (lack of) funding opportunities. The question, then, is to which degree the findings presented here can be generalized to other European/Western (or even non-European/non-Western) countries. Relevant to this issue, our findings on the effects of met expectations confirm ideas developed by U.S. researchers (e.g., Gakovic & Tetrick, 2003); in this sense, we expect that the effects reported here will generalize to other Western countries as well. However, ultimately this is an empirical question, and additional research – preferably conducted in non-Western countries – should reveal whether our results hold up for other cultures as well.

A fourth important limitation concerns the validity and reliability of our concept of intrinsic work values. As regards its validity, this concept was measured with five items tapping the degree to which the job is interesting, offers variety, autonomy, and the opportunity to learn new things, as well as whether one experiences a good match between abilities and job requirements. Conceptually, however, this concept would seem to be much broader, also encompassing aspects such as job prestige, recognition, responsibility and the quality of social relationships at work. In this sense, we do not claim that our findings extend to these job aspects as well; future research should preferably include a broader measure of intrinsic work aspects. As our measure of met expectations was commensurate with our measure of intrinsic work aspects, a similar recommendation applies to this scale as well.

Further, we found low reliabilities for our measure of intrinsic work values. We addressed this problem in our structural equation analyses using a latent variable approach for this concept. By partialling out the measurement errors of the separate items of this concept, we should theoretically obtain an unbiased estimate of the association among this concept and other concepts (e.g., Jöreskog & Sörbom, 1999; MacKenzie, 2001). Given that our SEMs revealed several significant across-time associations between this concept and other study concepts, the lack of reliability of the overall concept did not constitute a major problem here. In our other analyses (the MANOVAs and logistic regression analyses), such an approach was not feasible. This suggests that the effects involving intrinsic work values will have been underestimated (but see MacKenzie, 2001). In this light, it is encouraging that we found several significant effects involving this concept, suggesting that in the present study lack of statistical power due to unreliability may have effectively been compensated by large sample size. Interestingly, this did not apply to the moderator effects of intrinsic work values; these were insignificant in all analyses. It would seem well possible that this lack of significant interaction effects for this measure is due to its unreliability, again suggesting that future research on this issue should use a different, more extensive and more reliable, measure of the importance attached to intrinsic work aspects. It also suggests that our findings regarding the moderator effects of this concept should be viewed as preliminary, rather than as conclusive evidence for these effects.

### Study Implications

In spite of these important limitations, we believe that the present research holds several implications for research and practice. *Scientifically*, the present research uncovered two ways in which unmet expectations longitudinally affect work outcomes. First, unmet expectations affect work outcomes *directly*, possibly as a result of an attempt to withdraw oneself from an unrewarding exchange relation-

ship with the organization (e.g., Taris *et al.*, 2004). Further, we found that unmet expectations affected work outcomes also *indirectly*, through lowered intrinsic work values. Our results suggest that workers who feel that their expectations regarding particular intrinsic work values are not met tend to consider these as less important across time, perhaps as a form of coping with the stress resulting from an unsatisfactory exchange relationship (cf. Geen, 1995; Lazarus & Folkman, 1984); in turn, workers who consider these work aspects as less important report lower levels of learning motivation and lower levels of effort than others.

Further, our findings suggest that the process of work adjustment among newcomers extends to the importance attached to various work aspects. Aspects for which one's expectations are met tend to be considered as more important across time; aspects for which one's expectations remain unmet tend to become less important across time. Thus, it appears that the quality of one's employment affects workers' psychological makeup, in the sense that the degree to which workers are motivated to run the extra mile partly depends on the degree to which their expectations are met. Previous research also suggested that work characteristics (especially job demands and job control) affect worker motivation (e.g., Karasek & Theorell, 1990; Taris & Kompier, 2005, for an overview), and in this sense the present research enhances earlier findings on the relationship between the experience of employment and work-related outcomes.

Finally, the present research did not confirm our expectations that the relationship between unmet expectations and work outcomes would be moderated through the importance attached to the work aspects in question. Previous theorizing, albeit in a different field, suggested that such moderator effects would be present (Feather, 1995). One possible methodological explanation for the lack of moderator effects would be the unreliability of our measure of intrinsic work values. Above we have argued that the effects of this measure may indeed have been underestimated, but that our large sample size might compensate for the lack of power due to unreliability. If correct, this reasoning questions the importance of such moderator effects; workers may or may not consider particular work aspects important, but regardless of the subjective importance attached to these expectations, they would like to see their expectations to be met. However, as our measure of the importance of intrinsic work aspects was relatively unreliable, these findings should be considered as preliminary, rather than as conclusive evidence for this issue.

From a practical point of view, our finding that unmet expectations contributed longitudinally to a variety of adverse work outcomes is especially important. This supports the practice of holding realistic job previews to ensure that newcomers do not hold unrealistically high expectations (cf. Buckley *et al.*, 1998; Hom, Griffeth, Palich, & Bracker, 1999), and underlines the saliency of psychological contracts, taken as unwritten expectations that newcomers

and the organizations they work for hold towards each other (Dabos & Rousseau, 2004). As noted above, the effects of unmet expectations on the outcome variables may seem small, but – as they accumulate across time – they may be practically quite relevant. Further, as measures for moderating newcomers' expectations are not especially difficult or expensive to implement, our results suggest that implementation of such measures may outweigh the costs associated with these measures.

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